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10/672,604	09/26/2003	Mathilde Benveniste	AVA04-01	3701

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CASCA, FRED A

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/672,604	BENVENISTE, MATHILDE	
	Examiner	Art Unit	
	Fred A. Casca	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 March 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-10,12-14,16-19 and 21-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3, 5-10, 12-14, 16-19, and 21-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to applicant's amendment filed on March 29, 2007. Claims 1-3, 5-10, 12-14, 16-19, and 21-26 are still pending in the present application. **This Action is made FINAL.**

Response to Arguments

2. Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

3. Applicant's arguments filed March 29, 2007 with respect to claims 8-22 have been fully considered but they are not persuasive.

4. In response to arguments with reference to claim 12 that "in contrast to Sherman, claim 12 discloses generating a first frame which includes an acknowledgement along with a payload, then receiving a second frame and wherein the acknowledgement included as part of the first frame is intended as a response to the second frame. Stated differently, claim 12 recites sending an acknowledgement of a frame before receiving the frame", it is noted that the features upon which the applicant relies are not cited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. *See in re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).* Sherman clearly teaches generating a first frame comprising a data payload and an acknowledgement, receiving via a shared communication channel a second frame after generating, and wherein acknowledgement is intended as a response to the second frame (see figures 1-2C and paragraphs 5, 8, 28-31 and 40, "A frame sent from the STA to the PC may include an acknowledgment of a

data frame just received from the PC", "Acknowledgements and polls may be "piggybacked" on data frames, permitting a wide variety of allowed frame sequences", "Correct reception of RR frames received during a CCI is acknowledged in the next transmitted CC frame", note that a second and subsequent other frames are generated that comprise data payload piggybacked with an ACK, and a processor inherently exists that generates such frames. Further, the concept of piggybacking with an ACK clearly reads on the language of the claim).

5. In response to arguments with reference to claims 8 and 18 that "in contrast to Dickson, claims 8 and 18 recite that the third frame is generated before the first frame is transmitted, thus no frames have to received in order to generate a transmission frame", it is noted that the features upon which the applicant relies are not cited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. *See in re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).* The phrase "no frames have to be received in order to generate a transmission frame is not in the claims. The combo of Sherman/Dickson clearly reads on the language of claim presented by the applicant. Further, the claim language simply states the concepts of transmitting frames, polling, generating frames and sending ACKs which are well known in digital communications and the combinations of Sherman/Dickson can clearly be arranged in multiple ways to read on them. (see the rejection of claims 8 and 18 below for more details).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Independent claim 1 amended includes new matters that were not described in the specification. The phrases "in advance of receiving the first frame" in claim 1 is not described in the specification.

7. Claims 12 and 14-17 remain under 35 U.S.C. 102(e) as being anticipated by Sherman (US 2003/0161340 A1). Please refer to the rejection of claims 12 and 14-17 in the office action dated 01/09/2007.

8. Claim 13 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman (US Pub. No. 2003/0161340 A1) in view of Chintada et al (US Pub. No. 2002/0118667 A1).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1 and 3-7 are rejected under 35 U.S.C. 102(e) as being unpatentable over Sherman (US 2003/0161340 A1) in view of Trainin (US 2004/0120292 A).

Referring to claim 1, Sherman discloses an apparatus (figure 1) comprising a receiver for receiving a first frame via a shared-communications channel (figures 1-2C, and paragraphs 33-36, 38, and 41-43, "MS101", "wireless network", "frame 210"); and

a processor for generating a second frame that comprises both a data payload and an acknowledgement of the receipt of said first frame (figures 1-2C and paragraphs 5, 8, 28-31 and 40, "A frame sent from the STA to the PC may include an acknowledgment of a data frame just received from the PC", "Acknowledgements and polls may be "piggybacked" on data frames, permitting a wide variety of allowed frame sequences", "Correct reception of RR frames received during a CCI is acknowledged in the next transmitted CC frame", note that a second and subsequent other frames are generated that comprise data payload piggybacked with an ACK, and a processor inherently exists that generates such frames).

Sherman does not specifically disclose generating ACK of the receipt of the first frame in advance of receiving the first frame, as claimed.

Trainin discloses generating ACK of the receipt of the first frame in advance of receiving the first frame (paragraph 41, prior to issuing a response frame (e.g., the ACK Frame), the MAC device 204 performs some processing") because generating (processing) ACKs in advance would save time when ACKs are needed to be sent.

It would have obvious to one of the ordinary skill in the art at the time of invention to modify the system of Sherman as claimed by incorporating the teachings of Trainin for the purpose of providing a more efficient communication system.

Referring to claims 3, the combo of Sherman/Trainin discloses the apparatus and method of claims 1 and 12 and further discloses a transmitter for transmitting the second frame via the shared-communications channel (Sherman, 1-2C and paragraphs 5, 8, 28-31).

Referring to claims 4, the combo of Sherman/Trainin discloses the apparatus and method of claims 3 and 14 wherein the receiver and the transmitter are IEEE 802.11 compliant (paragraphs 5, 8, 28-31).

Referring to claims 5, the combo of Sherman/Trainin discloses the apparatus of claim 1 further comprising a host interface for receiving the data payload from the host computer (figures 1-2C and paragraphs 5, 8, 28-31).

Referring to claims 6, the combo of Sherman/Trainin discloses the apparatus and method of claims 1 and 12 wherein the second frame also comprises a poll (figures 1-2C and paragraphs 5, 8, 28-31 and 40).

Referring to claims 7, *the combo of Sherman/Trainin* discloses the apparatus and method of claims 1 and 12, and further disclose the first frame comprises an acknowledgement of the receipt of the third frame and second frame comprises an acknowledgement (figures 1-2C and paragraphs 5, 8, 28-31 and 40, note that acknowledgements can be piggybacked to any data frame to acknowledge the receipt of any previous frames).

11. Claim 23 is rejected under 35 U.S.C. 102(e) as being unpatentable over Sherman (US 2003/0161340 A1) in view of Trainin (US 2004/0120292 A) and further in view of well known prior art (MPEP 2144.03).

Referring to claim 23, the combo of Sherman/Trainin discloses apparatus of claims 1.

The combo of Sherman/Trainin fails to disclose said processor is also for one of the group consisting of coding at least one bit of said second frame, compressing at least one bit of said second frame, filtering at least one bit of said second frame and performing an application-specific operation on at least one bit of said second frame.

The examine takes official notice of the fact that the concepts of coding (e.g., spreading, encrypting), compressing, filtering and performing application specific operations are well known in the art.

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the apparatus of Sherman/Trainin as claimed by incorporating the teachings of prior art for the purpose of providing a more secure communication apparatus.

12. Claims 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman (US Pub. No. 2003/0161340 A1) in view of Trainin (US 2004/0120292 A) and further in view of Chintada et al (US Pub. No. 2002/0118667 A1).

Referring to claims 2, the combo of Sherman/Trainin discloses the apparatus and method of claims 1.

The combo of Sherman/Trainin does not specifically disclose the processor is also encrypting at least one bit of said second frame.

Chintada discloses encrypting data in a frame (paragraph 35).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the apparatus of Sherman/Trainin by incorporating the teachings of Chintada for the purpose of creating a secure communication system.

13. Claims 8, 10-11, 18, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman (US Pub. No. 2003/0161340 A1) in view of Dickson (US Pub. No. 2004/0037320 A1).

Referring to claim 8, Sherman discloses an apparatus (figure 1) comprising:

(i) a first station (paragraph 5, "Hybrid Coordinator (HC)") for:

(a) transmitting a first frame comprising a first poll to a second station (figures 1-2C and paragraph 5, "The HC generally grants the use of medium to a STA by polling it"); and

(b) transmitting a second frame comprising a first acknowledgement and a second poll to said second station (figures 1-2C and paragraphs 5, 8, 28-31, 33-38, "protocols provide centralized control of the wireless media during specified periods of time", "IEEE 802.11 standard defines over-the-air protocols necessary to support", "a requesting STA may transmit one frame for each CF-POLL received. The STA responds with a null data frame if there is no traffic to send", "A frame sent from the STA to the PC may include an acknowledgement of a data frame", "The PC may use a minimal spacing of SIFS between frame to a STA, a responding frame includes an acknowledgement using a SIFS interval between the data and acknowledgement", "Acknowledgement and polls may be "piggybacked" on data frames, permitting a wide variety of sequences", note that in a contention-free protocol e.g., 802.11 standards a second frame comprising an ACK and a second poll is inherent); and

(ii) said second station for:

(a) generating said third frame comprising a data payload and a second acknowledgement (figures 1-2C and paragraphs 5, 8, 28-31, 33-38, note that in a contention-free protocol system once a channel is assigned to a portable host and the portable host starts

transmitting data, the data and acknowledgements are inherently transmitted to a controlling device, e.g., the HC via a third frame. Thus, a third frame is inherently generated); and

(b) transmitting said third frame to said first station (figures 1-2C and paragraphs 5, 8, 28-31, 33-38, note that in a contention-free protocol system once a channel is assigned to a portable host and the portable host starts transmitting data, the data and acknowledgements are inherently transmitted to a controlling device, e.g., the HC via a third frame. Thus, a third frame is inherently generated and transmitted).

Sherman does not specifically disclose the **second frame is available before a third frame is transmitted,** third frame is generated before transmitting of the first frame, and third frame is **available before said transmitting of said second frame.**

Dickson discloses transmission frames can be generated beforehand and used as needed (paragraphs 32-33, and 91, "transmission frames can be generated before all of the data frames to be bundled have been received")

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the apparatus of Sherman by incorporating the teachings of Dickson for the purpose of providing an efficient communications system where delay is prevented since frames are generated in advance.

Referring to claim 18, claim 18 defines a communication method reciting features analogous to the features of the communication apparatus defined by claim 8 (as rejected above). Thus, the combinations of Sherman/Dickson disclose all elements of claim 18 (please see the rejection of claim 8 above).

Referring to claim 10, the combination of Sherman/Dickson discloses the apparatus of claim 8 and further disclose a host computer for generating said data payload (Sherman, figures 1-2C and paragraphs 5, 8, 28-31, 33-38, note that frames are inherently generated by a computer).

Referring to claim 11, the combination of Sherman/Dickson disclose the apparatus of claim 8 wherein said first station is at least one of an access point, a point coordinator, and a hybrid coordinator (Sherman, figures 1-2C).

Referring to claim 20, the combination of Sherman/Dickson disclose the apparatus of claim 18 and further disclose transmitting is in accordance with an IEE 802.11 protocol over a shared-communications channel (Sherman, paragraphs 5 and 28).

Referring to claim 21, the combinations of Sherman/Dickson disclose the method of claim 18 and further disclose transferring data payload from a host computer to the second station (Sherman, Figure 1).

Referring to claim 22, the combinations of Sherman/Dickson disclose the method of claim 18 and further disclose the second frame also comprises data (Sherman, figures 1-2C and paragraphs 5, 8, 28-31, 33-38).

14. Claims 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman (US Pub. No. 2003/0161340 A1) in view of Dickson (US Pub. No. 2004/0037320 A1) and further in view of well known prior art (MPEP 2144.03).

Referring to claim 24, the combo of Sherman/Dickson discloses apparatus of claims 1.

The combo fails to disclose said processor is also for one of the group consisting of coding at least one bit of said second frame, compressing at least one bit of said second frame, filtering at least one bit of said second frame and performing an application-specific operation on at least one bit of said second frame.

The examine takes official notice of the fact that the concepts of coding (e.g., spreading, encrypting), compressing, filtering and performing application specific operations are well known in the art..

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the apparatus of Sherman/Dickson as claimed by incorporating the teachings of prior art for the purpose of providing a more secure communication apparatus.

15. Claims 9and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman (US Pub. No. 2003/0161340 A1) in view of Dickson (US Pub. No. 2004/0037320 A1) and further in view of Chintada et al (US Pub. No. 2002/0118667 A1).

Referring to claims 9 and 19, the combinations of Sherman/Dickson disclose the apparatus and method of claims 8 and 18.

The combinations of Sherman/Dickson does not disclose encrypting at least one bit of said third frame before said transmitting of said first frame.

Chintada discloses encrypting data in a frame (paragraph 35).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the apparatus and method of Sherman/Dickson by incorporating the teachings of Chintada for the purpose of creating a secure communication system.

16. *Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman* in view of well known prior art (MPEP 2144.03).

Referring to claim 25, Sherman disclose the method of claim 12 (see rejection of claim 12 in office action dated 1/09/2007).

Sherman fails to disclose said processor is also for one of the group consisting of coding at least one bit of said second frame, compressing at least one bit of said second frame, filtering at least one bit of said second frame and performing an application-specific operation on at least one bit of said second frame.

The examine takes official notice of the fact that the concepts of coding (e.g., spreading, encrypting), compressing, filtering and performing application specific operations are well known in the art.

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the apparatus of Sherman as claimed by incorporating the teachings of prior art for the purpose of providing a more secure communication apparatus.

17. *Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman (US Pub. No. 2003/0161340 A1) in view of Dickson (US Pub. No. 2004/0037320 A1) and further in view of Chintada et al (US Pub. No. 2002/0118667) and further* in view of well known prior art (MPEP 2144.03).

Referring to claim 26, the combo of *Sherman/Dickson/ Chintada disclose the method claim 18.*

The combo fails to disclose said processor is also for one of the group consisting of coding at least one bit of said second frame, compressing at least one bit of said second frame, filtering at least one bit of said second frame and performing an application-specific operation on at least one bit of said second frame.

The examine takes official notice of the fact that the concepts of coding (e.g., spreading, encrypting), compressing, filtering and performing application specific operations are well known in the art.

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the apparatus of combo as claimed by incorporating the teachings of prior art for the purpose of providing a more secure communication apparatus.

Conclusion

18. **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred A. Casca whose telephone number is (571) 272-7918. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid, can be reached at (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GEORGE ENG
SUPERVISORY PATENT EXAMINER